Chapter 8

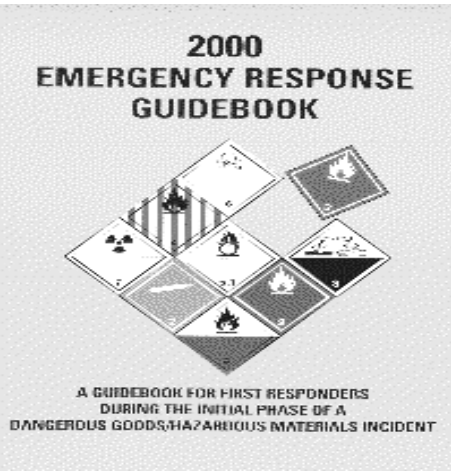
THE EMERGENCY RESPONSE GUIDEBOOK

Notes

Objectives

After completing this chapter, participants will be able to:

- ► Find correct guides, using the name or UN number of a material
- ► Understand the need to remain distant from hazardous releases
- ► Describe the uses – and limits – of the guidebook.



Introduction

The Emergency Response Guidebook (ERG) identifies hazardous materials and gives emergency actions for spills or releases. It is broken into color-coded sections so you can find what you're looking for quickly. It was designed for transportation emergencies and DOT (Department Of Transportation) placards and numbers are a major part of the guide.

If an emergency doesn't involve transportation, you can still use the guide to identify materials and find the hazards. Much of the information is for firefighters. Unless you have more training and equipment you can't do most of the actions described in the orange and green sections.

Overview

What do the colors mean?

The Guidebook is divided into five sections, including white instruction pages at the front. The borders of the pages are colored so that you can plainly see the sections. Here is what each section contains:

Page Colors	Contents
White	Instructions for using the guide
Yellow	Directs you to the right guide if you know the 4-digit UN number from a placard
Blue	Directs you to the right guide if you know the name of the chemical
Orange	The guides—hazards and emergency instructions
Green	Evacuation distances for some very hazardous materials

Caution

When you look at the orange and green pages, it is obvious that much of the information is **NOT** meant for people trained at awareness level, which is the level of this training. For example, the orange guides may say to put on an air tank (SCBA) and spray water or foam on the spill--you're not going to do that!

The same principle applies to the green pages. You should move to a safe distance and stop people from going towards the spill, but you aren't going to go door-to-door and evacuate people in the immediate area of the incident.

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The Sections In More Detail

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White pages: Instructions

The Three Key Instructions:

1. identify the material (from a safe distance)
2. call for help and
3. keep people from going towards the spill

For more information:

- MSDS's - Material Safety Data Sheets for the chemicals
- The shipper / manufacturer
- CHEMTREC (1-800-424-9300)

CHEMTREC is a free emergency response resource provided by the Chemical Manufacturers Association, an industry group.

You Can Only See a Placard

If you can see a placard but no UN number or chemical name turn to pages 14 - 15 of the white pages for a general guide for different classes of hazardous materials. Included there is Guide 111, for "dangerous" materials. Whenever you use general information, update it with more specific guides when further information becomes available.

Yellow pages: You only have the four-digit number

On the placard or an orange panel, you may be able to see a four-digit number. This is the UN or NA identification number. Turn to the yellow pages and you will see the chemicals arranged by ID number. Next to the ID number you will see its guide number (found in the orange pages). When you turn to the guide you will find short-term emergency information about the chemical.

ID No.	Guide No.	Name of Material
——	135	p-Nitrosodiethylaniline
——	171	Plastic molding material
——	171P	Polymerizable material, stabilized with dry ice
——	133	Wool waste, wet
1001	116	Acetylene
1001	116	Acetylene, dissolved
1002	122	Air, compressed
1003	122	Air, refrigerated liquid (cryogenic liquid)
1003	122	Air, refrigerated liquid (cryogenic liquid), non-pressurized
1005	125	Ammonia, anhydrous

For example,

you are the first on the scene of a chemical truck accident; you pull out your binoculars and try to read the placard. The placard reads 1203. This is the UN ID Number, so you look for 1203 in the Yellow section and find that this

truck contains Gasoline. The Guide Number for gasoline is 128, so you look for Guide 128 in the Orange Section.

Shaded Entries:

If the placard reads 1017, you will find that you are dealing with chlorine. You also note that the entry in the Yellow section is ***shaded.*** This means that you can find the distances to move to in the green section as well as the information of the Guide in the Orange pages.

Blue pages: If You Have the Name of the Chemical.

If you have the name of the chemical (from the MSDS or the shipping papers), turn to the Blue section.

For example,
the driver of an overturned truck tells you he is carrying gasoline, you look up "gasoline" in the Blue section and find that the Guide Number is 128. Turn to the Orange section to look up the hazards and emergency procedures under Guide Number 128.

Name of Material	Guide No.	ID No.
N-Aminopropylmorpholine	154	1760
Aminopyridines	153	2671
Ammonia, Anhydrous	125	1005
Ammonia, Anhydrous, liquefied	125	1005
Ammonia, solution, with more Than 10% but no more than 35% Ammonia	154	2672

More than one chemical can have the same Guide

This is because different chemicals can have the same kind of hazards. For example, Guide Number 128 applies not only to gasoline, but also motor fuel, isoprene, kerosene, and many other chemicals. This grouping of similar hazardous materials is done in order to make the guidebook as brief as possible.

Two cautions:

1) The chemical names can be long, hard to spell, and very different materials may have similar names. You must be *especially* careful with names, or rely on the ID number to identify the materials. (See example below.)

2) Having the MSDS or shipping papers is one way to get the exact spelling of a chemical but DO NOT PUT YOURSELF IN DANGER to get them. For example, don't climb into the cab of a leaking tanker truck to get the shipping papers!

Name of Material	Guide No.	ID No.
Potassium arsen***a***te	151	1677
Potassium arsen***i***te	154	1678

Example of substances with only one different letter in the names

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Orange pages: Using the Guides

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Potential Hazards

This is the first thing you find in the guide. There are two kinds of hazards, and the biggest danger is listed first.

Health Hazard	Could poison you, make you unconscious, damage your lungs, eyes, skin or somehow hurt your body.
Fire or Explosion	Could burn, blow up, or react with other chemicals violently.

For example,

our first chemical example, gasoline, lists "Fire or Explosion" first; starting with bold type saying that this is HIGHLY FLAMMABLE. Other information follows, including the Health section just below, but the fire hazard is given top priority.

For the second chemical, chlorine, "Health" is listed first. The first word is TOXIC. For this chemical the health effects are the biggest danger to people near the spill or release.

NOTE: The health effects listed in the Guides describe short-term (acute) effects of the chemical. This isn't your best guide to chronic (long-term) health effects.

One more time--Beware!

Most of the information these Guides are meant for firefighters, police, and HazMat teams. It may be useful to you immediately following an incident, especially of there is no other source of information available.

Green pages: How far away should you go?

If a chemical is highlighted in the yellow or blue pages, there is information about how far away to go from a spill or release. You would turn to the green pages to find the **isolation** and **protective action** distances:

Initial Isolation Zone	The distance immediately around an emergency spill, also called the "hot zone"
Protective Action Distances	This is measured downwind from the spill – everyone within this distance could be harmed by the chemical release

How Large is Large—and is it nighttime?

The tables in the green pages consider how small or large a spill is. (More than the contents of a 55-gallon drum is "large.") In addition, there are different distances for protective action during the day and night (night time is farther.)

Material	Isolate all directions Large spill	Protect Downwind Large spill at night
Ammonia, anhydrous, liquid	300 feet	Half mile
Chlorine	600 feet (hot zone)	1.9 miles
Methyl Vinyl Ketone	1,700 feet	7+ miles

Emergency Response Guidebook

Key Points **8**

1) The Guides given in the Emergency Response Guidebook (ERG) are only general minimum recommendations.

2) The ACTIONS described in the orange and green sections are for firefighters or HazMat teams only!

3) The yellow and blue sections help you identify materials and point you to a Guide in the orange section.

4) The Orange section of the NAERG Guidebook provides information on health, fire and explosion hazards and a guide for emergency action.

5) The Green section tells you how far to stay away from a spill or release.

6) If a "DANGEROUS" placard is displayed or no placard can be found, follow Guide Number 111, as you continue to seek more specific information about the hazardous material.